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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/580,523	09/28/2007	Joey Dewayne Veasey	19214-011US1	4220

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EXAMINER

SUERETH, SARAH ELIZABETH

ART UNIT	PAPER NUMBER
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3749

MAIL DATE	DELIVERY MODE
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06/23/2010

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/580,523	Applicant(s) VEASEY ET AL.	
	Examiner Sarah Suereth	Art Unit 3749	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 May 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 May 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>5/24/06</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-7,9,10,12,14,15,17-20,22-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Clawson (6641625) in view of Fredin-Garcia Jurado (6280180).

3. Clawson discloses: a fuel reformer including a thermocouple that measures the temperature of the catalyst bed (col. 26, lines 3-6), and a burner (122) with a flame produces exhaust (col. 17, lines 1-2).

4. Clawson discloses the invention as claimed with the exception of a flame detector for disabling the burner in the absence of a flame.

5. Fredin-Garcia Jurado discloses a flame ionization detector (col. 5, lines 49-52) joined to a controller for turning off the burner if no flame is sensed (col. 7, lines 27-31).

6. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the Clawson apparatus to include the flame sensor of Fredin-Garcia Jurado in order to prevent a gas explosion if the burner continues to release gas with no flame (col. 1, lines 25-31).

7. Regarding claims 6,7,9,10,22,23 Clawson discloses an oxygen sensor in the exhaust stream (148) that is regarded as being "automotive type".

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8. Regarding claims 14,15, the burner air flow is controlled based on the oxygen sensor reading (col. 32, lines 43-47).

9. Regarding claim 18, there is a controller (C).

10. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Clawson (6641625) in view of Fredin-Garcia Jurado (6280180), further in view of Greeb (6095793).

11. Clawson, as discussed above, discloses only a single thermocouple.

12. Greeb discloses a method of monitoring a catalytic section including using two thermocouples, comparing their readings, and indicating an error if they exceed a predetermined range (col. 14, lines 50-61).

13. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the Clawson temperature monitoring with the method steps taught by Greeb, in order to ensure temperature uniformity in the catalyst (col. 14, lines 47-48).

14. Claims 8,11,16 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Clawson (6641625) in view of Fredin-Garcia Jurado (6280180), further in view of Kralick (20050170226).

Clawson, as discussed above, determines the combustion quality by using an oxygen sensor.

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Kralick discloses a fuel reformer using a qualitative hydrocarbon sensor (see claim 1).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the Clawson apparatus with the hydrocarbon sensor taught by Kralick, in order to ensure residual hydrocarbons will not destroy fuel cells (see abstract).

Conclusion

15. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sarah Suereth whose telephone number is (571) 272-9061. The examiner can normally be reached on Tuesdays & Thursdays 8:00AM-4:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steve McAllister can be reached on (571) 272-6785. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Sarah Suereth/
Examiner, Art Unit 3749

/Steven B. McAllister/
Supervisory Patent Examiner, Art Unit 3749